

**HARD OR SOFT WATER IN COOKING.**—Nearly every one knows that *hard* water is such in consequence of its containing a small quantity of carbonate of lime, whereas *soft* water is nearly pure. It may not have occurred to every one that this difference often becomes an important one in the daily process of cooking. When vegetables are boiled in hard water, a deposit of this lime is made upon the surface of the vegetables, as peas, beans, corn, &c., by which process the food is not only not so thoroughly cooked in a given time, but even when done is not so well done. It is always harder when cooked, and less healthy. The minute deposit of lime upon the surface of such vegetables, not only impairs the taste and diminishes the softness of the food, but also acts unfavorably upon the digestion—an effect important to those in health, and doubly so to invalids. This subject might be expanded at some length, but we merely suggest it, and leave it for the reader's consideration, whether a pure soft water is not preferable to hard, for all the ordinary processes of cooking.—J. E. S.

**WATER-PROOF TEXTILE FABRICS.**—Take one pound of wheat bran, and one ounce of glue, and boil them in three gallons of water in a tin vessel for half an hour. Now lift the vessel from the fire, and set it aside for ten minutes; during this period the bran will fall to the bottom, leaving a clear liquor above, which is to be poured off, and the bran thrown away; one pound of bar soap cut into small pieces is now to be dissolved in it. The liquor may be put on the fire in the tin pan, and stirred until all the soap is dissolved. In another vessel, one pound of alum is dissolved in half a gallon of water; this is added to the soap-bran liquor while it is boiling, and all is well stirred; this forms the water-proofing liquor. It is used while cool. The textile fabric to be rendered water-proof is immersed in it, and pressed between the hands until it is perfectly saturated. It is now wrung, to squeeze out as much of the free liquor as possible, then shaken or stretched, and hung up to dry in a warm room, or in a dry atmosphere out-doors. When dry, the fabric or cloth so treated will repel rain and moisture, but allow the air or perspiration to pass through it.

The alum gluten, gelatine and soap, unite together, and form an insoluble compound, which coats every fibre of the textile fabric, and when dry, repels water like the natural oil in the feathers of a duck. There are various substances which are soluble in water singly, but when combined, form insoluble compounds, and *vice versa*. Alum, soap and gelatine are soluble in water singly, but form insoluble compounds when united chemically. Oil is insoluble in water singly, but combined with caustic soda or potash, it forms soluble soap. Such are some of the useful curiosities of chemistry.—*Scientific American*.

#### SALE OF NORTH DEVON CATTLE.

We would call attention to the Sale of North Devons by Mr. Wainwright, advertised in our present number. We are assured that this is one of the best herds in the United States, and the animals advertised will be sold.

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